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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,299	08/20/2004	Jacob Waugh	4649-4007	3791

7590 03/24/2006
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EXAMINER

COTTON, ABIGAIL MANDA

ART UNIT PAPER NUMBER

1617

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/505,299		WAUGH ET AL.	
	Examiner		Art Unit	
	Abigail M. Cotton		1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-85 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-85 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the amendment submitted on January 11, 2006. Claims 44-85 have been newly added to the application, with claims 1-43 having been canceled. Accordingly, claims 44-85 are being examined on the merits herein.

The objection to the claims for the omission of claim 35 from the claim listing is being withdrawn in view of Applicant's cancellation of claims 1-43.

The objection to claims 8 and 21 as being of improper dependent form for failing to further limit the claims from which they depend is being withdrawn in view of the cancellation of these claims.

The rejection of claims 27-34 and 36-43 under 35 U.S.C. 112, first paragraph, as lacking enablement for the full scope of the claims is being withdrawn in view of Applicant's cancellation of these claims. The Examiner furthermore notes that newly presented claims 68 and 76 recite a method of "method of therapeutically caring for," and do not recite a prophylaxis as in the previously rejected claims.

The rejection of claims 14-26 and 36-43 under 35 U.S.C. 112, second paragraph, as being indefinite for reciting the polymer comprising amino acids that "are not therapeutically effective" is withdrawn in view of Applicant's cancellation of these claims.

Applicant's arguments filed January 11, 2006 regarding the rejections of the claims over the prior art have been fully considered but they are not persuasive. The newly presented claims are rejected as follows.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 44-69, 71, 76-77, 79 and 84-85 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0009491 to Rothbard et al, published January 24, 2002.

Rothbard et al. teaches providing compositions for enhancing the delivery of drugs and other agents across a biological barrier, such as skin, the composition employing a delivery enhancing transporter, such as a poly-arginine molecule that is between 6 and 50 residues in length (see abstract, in particular.) Rothbard teaches that examples of such delivery enhancing transporters can comprise from 7 to 15 amidino moieties, such as heptamers, octamers, nonamers and the like of arginine (se

paragraph 0048, in particular.) Rothbard et al. furthermore teaches that the amino acids can be L amino acids (see paragraph 0055, in particular.) Rothbard et al. teaches that the compositions comprising the polyarginine molecule can comprise a conventional pharmaceutical carrier and can be formulated for topical administration in a suitable format, such as a lotion (see paragraphs 0128 and 0134, in particular), and thus teaches providing a dermatologically acceptable vehicle.

Rothbard et al. does not teach a specific example of composition having a polymer comprising from 7 to 15 subunits of L-arginine in a cosmetically or dermatologically acceptable vehicle. However, as Rothbard et al. teaches that the transport enhancing polymers can comprise from 7 to 15 amidino moieties, such as heptamers, octamers and nonamers of arginine, which may be L-arginines, and furthermore teaches that such transport enhancing agent can be formulated with pharmaceutical carriers for topical administration, it is considered that one of ordinary skill in the art at the time the invention was made would have found it obvious to provide a polymer having a number of arginine subunits within the range recited in claim 44, and with a dermatologically acceptable vehicle, with the expectation of providing a transport enhancing composition suitable for topical application.

Regarding the recitation that the composition comprises a "vasodilating amount of polymer," as recited in claims 44 and 56, it is noted that Rothbard et al. teaches the composition having the transport enhancer can generally comprise from about 5% to

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about 75% by weight of a compound/transport combination (see paragraph 0128.) An amount of 5% to 75% is believed be substantial enough range to provide overlap and/or to come close to an amount that would also have vasodilating properties. Furthermore, it is considered that one of ordinary skill in the art at the time the invention was made would have found it obvious to vary and/or optimize the amount of the transport enhancer provided in the composition, according to the guidance provided by Rothbard et al, to provide a composition having desired transport properties. It is noted that "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955.)

Regarding claims 44 and 56, it is noted that, for the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, the transitional phrase "consisting essentially of" is being construed as equivalent to "comprising," absent a clear indication in the specification or claims of what is meant by, i.e. what is being excluded from the composition by, the phrase "consisting essentially of." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355, and MPEP 2111.03.

Regarding independent claim 56, Rothbard et al. furthermore teaches that peptides comprising arginine in addition to other amino acid residues can also be used as the delivery-enhancing polymer, and furthermore teaches that the delivery-enhancing transporters of the invention can be flanked by, or interrupted by, one or even more than

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one non-guanidino/non-amidino subunits (such as glycine, alanine and cysteine), that do not significantly affect the rate of transmembrane transport of the delivery-enhancing compound compositions (see paragraphs 0048 and 0071, in particular.) Accordingly, Rothbard et al. teaches the polymer having contiguous arginine subunits, with a number of subunits that overlaps with the range claimed in claim 56, the polymer being flanked by one amino acid other than L-arginine, in which the L-arginine subunits would be situated at the C-terminus or the N-terminus of the polymer, as recited in claim 56. Rothbard et al. furthermore teaches providing a dermatologically acceptable carrier in combination with delivery-enhancing polymers, as discussed for claim 44 above, and thus the composition recited in claim 56 is also obvious over the teachings of Rothbard et al.

Regarding claims 45-47 and 57-59, Rothbard et al. teaches providing heptamers of arginine (see paragraph 0048, in particular), which is a polymer containing 7 contiguous arginine subunits, and thus meets the limitation of these claims. Regarding claims 48-50 and 60-62, Rothbard et al. teaches that the delivery-enhancing polymer can be formulated as a lotion for application to skin (see paragraph 0134, in particular.) Regarding claims 51 and 63, Rothbard et al. teaches the subunits are L-arginine (see paragraph 0048, in particular.)

Regarding claims 52-53 and 64-66, Rothbard et al. teaches the topical composition can further comprise skin care actives such as vitamins, antibacterial and

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analgesics, as well as sunscreen components, among others (see paragraphs 0140-0152, in particular.)

Regarding claims 55 and 67, Rothbard et al. furthermore teaches that small organic molecule agents can be combined with the transporters to facilitate or enhance transport (see paragraph 0076, in particular.) Rothbard et al. teaches that such compounds can include small organic molecules that have poor solubilities in aqueous liquids (see paragraph 0076, in particular), and thus are hydrophobic. Rothbard et al. furthermore teaches that the biologically active agent and delivery enhancing transporter are linked by an ionic association, such as between the charged arginine side chain and a charged group on the biologically active agent (see paragraph 0044 and Figure 1, in particular.) While Rothbard et al. does not specifically exemplify linking the biologically active agent to the side chain of the terminal L-arginine subunit, it is considered that one of ordinary skill in the art at the time the invention was made would have found it obvious to provide such an association, based on the ion pair teachings of Rothbard et al, with the expectation of providing a suitable transport pair for skin treatment.

Regarding the methods of therapeutically caring for skin, hair, lips or gums by applying an enhancing effective amount of the composition of claims 44 and 56, as recited in claims 68 and 76, it is noted that Rothbard et al. teaches topical compositions comprising the composition for the treatment of skin (see paragraphs 0138-0152, in

particular.) As Rothbard et al. teaches that the composition enhances the transport of biologically active agents, it is considered that Rothbard teaches applying an enhancing effective amount of the composition, as recited in the claims.

Regarding claims 69 and 77, Rothbard et al. teaches applying the composition topically, as discussed above. Regarding claims 71, 79, and 84-85, Rothbard et al. teaches that the composition can comprise retinoids for the treatment of cutaneous aging, and thus teaches alleviating or minimizing the signs of aging of the skin as recited in the claims. Furthermore, regarding the method of minimizing tactile discontinuities as recited in claims 84-85, it is considered that are Rothbard et al. renders obvious the instant method of applying the composition as claimed, the process of Rothbard et al. must also necessarily minimize tactile discontinuities in the skin, as recited in the claims.

Claims 70 and 78 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent Application Publication No. 2002/0009491 to Rothbard et al, published January 24, 2002, as applied to claims 44-69, 71, 76-77, 79 and 84-85 above, and further in view of U.S. Patent No. 4,725,609 to Kull, Jr. et al, issued February 16, 1998.

Rothbard et al. is applied as discussed for claims 44-69, 71, 76-77, 79 and 84-85 above, and teaches topically applying a composition with a delivery-enhancing transporter comprising the polymer having the L-arginine subunits, as recited in claims

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44 and 56. Rothbard et al. teaches that the composition enhances delivery of active agents across a body surface or tissue, such as intact skin or a mucous membrane (see paragraph 0028, in particular.) Rothbard et al. teaches that the biologically active agents transported by the composition can include therapeutic agents comprising any composition that can be used to the benefit of a mammalian species, including small organic molecules, peptides, proteins or polypeptides, and oligosaccharides (see paragraph 0026, in particular.) Rothbard et al. teaches that the delivery enhancement can enhance the depth and extent of delivery of the active agent (see paragraph 0029, in particular.)

Rothbard does not specifically teach applying the composition for the promotion of angiogenesis in hair follicles, as recited in claims 70 and 78.

Kull, Jr. et al. teaches the topical delivery of an agent to promote angiogenesis, re-epithelialization and wound healing (see abstract, in particular.) Kull, Jr. et al. furthermore teaches that the topical formulations can comprise one or more agents to enhance dermal penetration (see column 3, lines 10-35, in particular.) Kull, Jr. et al. demonstrates that application of the topical compositions are capable of epithelial regeneration, including the regeneration of hair follicle epithelium, on wounded skin areas of animals (see column 5, lines 10-28, in particular.)

Accordingly, one of ordinary skill in the art at the time the invention was made would have found it obvious to provide the angiogenesis enhancing agent of Kull, Jr. et al. in the delivery-enhancing transporter containing composition of Rothbard et al, and topically delivering to promote angiogenesis in hair follicles, because Rothbard et al. teaches that the delivery-enhancing transporter can be used to enhance the delivery of skin benefit active agents to the skin, and Kull, Jr. et al. teaches that angiogenesis enhancing agents can be topically delivered to the skin to promote angiogenesis and wound healing, including of hair follicles, and can also be suitably provided with dermal penetration enhancing agents. Thus, one of ordinary skill in the art at the time the invention was made would have found it obvious to combine and topically apply the angiogenesis enhancing agent of Kull, Jr. et al. with the topical delivery-enhancing transporter composition of Rothbard et al, with the expectation of providing skin care capable of promoting angiogenesis of epithelium including hair follicle epithelium with enhanced penetration of the angiogenesis active agent.

Claims 72 and 80 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent Application Publication No. 2002/0009491 to Rothbard et al, published January 24, 2002, as applied to claims 44-69, 71, 76-77, 79 and 84-85 above, and further in view of U.S. Patent No. 5,785,978 to Porter et al, issued July 28, 1998.

Rothbard et al. is applied as discussed for claims 44-69, 71, 76-77, 79 and 84-85 above, and teaches topically applying a composition with a delivery-enhancing

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transporter comprising the polymer having the L-arginine subunits, as recited in claims 44 and 56. Rothbard et al. teaches that the composition enhances delivery of active agents across a body surface or tissue, such as intact skin or a mucous membrane (see paragraph 0028, in particular.) Rothbard et al. teaches that the biologically active agents transported by the composition can include therapeutic agents comprising any composition that can be used to the benefit of a mammalian species, including small organic molecules, peptides, proteins or polypeptides, and oligosaccharides (see paragraph 0026, in particular.) Rothbard et al. also teaches that the active agents can include vitamins (see paragraph 0095, in particular.) Rothbard et al. teaches that the delivery enhancement can enhance the depth and extent of delivery of the active agent (see paragraph 0029, in particular.)

Rothbard does not specifically teach applying the composition to enhance the appearance of lips, as recited in claims 72 and 80.

Porter et al. teaches skin care compositions to improve the appearance of skin, including the area of the upper lip (see abstract, in particular.) Porter et al. teaches that active agents used to improve such areas of the skin include vitamins (see column 1, lines 44-54, in particular.) Porter et al. furthermore teaches that such compositions can be administered with a permeation enhancer (see column 4, lines 28-40, in particular.)

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the lip appearance enhancing vitamins of Porter et al. into the skin care and delivery-enhanced transporting composition of Rothbard et al. for topical application to enhance the appearance of lips, because Rothbard et al. teaches that the delivery-enhanced transporting composition can be topically applied for skin care and can enhance the penetration of vitamins, and Porter et al. teaches that vitamins can be topically applied to improve the appearance of lips and can be applied with a permeation enhancer. Thus, one of ordinary skill in the art at the time the invention as made would have been motivated to combine and topically apply the lip appearance-enhancing vitamins of Porter et al. with the delivery-enhancing transporting composition of Rothbard et al. with the expectation of applying a composition having enhanced dermal penetration that improves the appearance of lips.

Claims 73 and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0009491 to Rothbard et al, published January 24, 2002, as applied to claims 44-69, 71, 76-77, 79 and 84-85 above, and further in view of U.S. Patent No. 5,902,593 to Kent et al, issued May 11, 1999.

Rothbard et al. is applied as discussed for claims 44-69, 71, 76-77, 79 and 84-85 above, and teaches topically applying a composition with a delivery-enhancing transporter comprising the polymer having the L-arginine subunits, as recited in claims 44 and 56. Rothbard et al. teaches that the composition enhances delivery of active

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agents across a body surface or tissue, such as intact skin or a mucous membrane (see paragraph 0028, in particular.) Rothbard et al. teaches that the biologically active agents transported by the composition can include therapeutic agents comprising any composition that can be used to the benefit of a mammalian species, including small organic molecules, peptides, proteins or polypeptides, and oligosaccharides (see paragraph 0026, in particular.) Rothbard et al. teaches that the delivery enhancement can enhance the depth and extent of delivery of the active agent (see paragraph 0029, in particular.)

Rothbard does not specifically teach applying the composition to enhance the sensitivity of skin, as recited in claims 73 and 81.

Kent et al. teaches a topically applied composition comprising an active ingredient, benzalkonium chloride, that increases tissue sensation (see abstract and column 1, lines 25-40, in particular.) Kent et al. teaches that the topical medicament is applied to sensitive tissue areas to produce increased sensitivity to physical contact (see column 1, lines 5-10, in particular.)

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the skin sensitivity enhancing active agent of Kent et al. into the skin care and delivery-enhanced transporting composition of Rothbard et al, for topical application to enhance the sensitivity of skin, because

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Rothbard et al. teaches that the delivery-enhanced transporting composition can be topically applied for skin care and to provide skin benefits by enhancing the penetration of active agents, and Kent et al. teaches that active agents can be topically applied to improve the sensitivity of skin. Thus, one of ordinary skill in the art at the time the invention as made would have been motivated to combine and topically apply the skin sensitivity-enhancing agents of Kent et al. with the delivery-enhancing transporting composition of Rothbard et al, with the expectation of applying a composition having enhanced dermal penetration that improves the sensitivity of skin.

Claims 74 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0009491 to Rothbard et al, published January 24, 2002, as applied to claims 44-69, 71, 76-77, 79 and 84-85 above, and further in view of U.S. Patent No. 5,637,316 to Ribier et al, issued June 10, 1997.

Rothbard et al. is applied as discussed for claims 44-69, 71, 76-77, 79 and 84-85 above, and teaches topically applying a composition with a delivery-enhancing transporter comprising the polymer having the L-arginine subunits, as recited in claims 44 and 56. Rothbard et al. teaches that the composition enhances delivery of active agents across a body surface or tissue, such as intact skin or a mucous membrane (see paragraph 0028, in particular.) Rothbard et al. teaches that the biologically active agents transported by the composition can include therapeutic agents comprising any composition that can be used to the benefit of a mammalian species, including small

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organic molecules, peptides, proteins or polypeptides, and oligosaccharides (see paragraph 0026, in particular.) Rothbard et al. teaches that the delivery enhancement can enhance the depth and extent of delivery of the active agent (see paragraph 0029, in particular.)

Rothbard does not specifically teach applying the composition for the stabilization or remodeling of fat, as recited in claims 74 and 82.

Ribier et al. teaches a slimming composition for topical treatment comprising a first dispersion capable of penetration into deep layers of the skin and containing at least one active agent chosen from lipolytic and firming agents (see abstract, in particular), and thus teaches providing an active agent for the stabilization or remodeling of fat. Ribier et al. teaches that it is desirable to be able to deliver such slimming agents to deep layers of the skin (see column 2, lines 46-54, in particular.) Ribier et al. teaches that active slimming agents for such deep-down action can include caffeine, nicotinic acid derivatives, and ginkgo biloba, among others (see column 6, line 32, through column 7, line 6, in particular.)

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the slimming active agents of Ribier et al. into the skin care and delivery-enhanced transporting composition of Rothbard et al, for topical application to stabilize or remodel fat, because Rothbard et al. teaches that the

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delivery-enhanced transporting composition can be topically applied for therapeutic skin care and can enhance the penetration of active agents, and Ribier et al. teaches that slimming active agents can be topically applied to combat plumpness and firm (see abstract and column 7, lines 45-55, in particular) and are desirably applied with a composition that is capable of delivering the slimming agents to deep layers of the skin. Thus, one of ordinary skill in the art at the time the invention as made would have been motivated to combine and topically apply the slimming active agents of Ribier et al. with the delivery-enhancing transporting composition of Rothbard et al, with the expectation of applying a composition having penetration into deep skin layers that combats plumpness and firms to provide stabilization and remodeling of fat.

Claims 75 and 83 are rejected under 35 U.S.C 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0009491 to Rothbard et al, published January 24, 2002, as applied to claims 44-69, 71, 76-77, 79 and 84-85 above, and further in view of U.S. Patent No. 4,933,172 to Clark, Jr. et al, issued June 12, 1990.

Rothbard et al. is applied as discussed for claims 44-69, 71, 76-77, 79 and 84-85 above, and teaches topically applying a composition with a delivery-enhancing transporter comprising the polymer having the L-arginine subunits, as recited in claims 44 and 56. Rothbard et al. teaches that the composition enhances delivery of active agents across a body surface or tissue, such as intact skin or a mucous membrane (see paragraph 0028, in particular.) Rothbard et al. teaches that the biologically active

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agents transported by the composition can include therapeutic agents comprising any composition that can be used to the benefit of a mammalian species, including small organic molecules, peptides, proteins or polypeptides, and oligosaccharides (see paragraph 0026, in particular.) Rothbard et al. teaches that the delivery enhancement can enhance the depth and extent of delivery of the active agent (see paragraph 0029, in particular.)

Rothbard does not specifically teach applying the composition for the treatment of gum regression, as recited in claims 75 and 83.

Clark, Jr. et al. teaches methods for treating destructive periodontal disease comprising applying a therapeutic agent directly to gingival tissue, such as gums (see abstract and column 2, lines 47-62, in particular.) Clark, Jr. et al. teaches that therapeutic active agents are capable of inhibiting the conversion of gingivitis to periodontitis and treating gingivitis (see column 1, lines 5-55, in particular), which are conditions associated with the inflammation of gums and gum recession.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the periodontal disease treating active agent of Clark, Jr. et al. into the skin care and delivery-enhanced transporting composition of Rothbard et al. for topical application to treat gum regression, because Rothbard et al. teaches that the delivery-enhanced transporting composition can be topically applied to

tissue including skin and mucous membranes to provide benefits to the tissue by enhancing the penetration of active agents, and Clark, Jr. et al. teaches that active agents can be topically applied to gum tissue to treat periodontal disease, and thus treat gum regression. Thus, one of ordinary skill in the art at the time the invention was made would have been motivated to combine and topically apply the periodontal disease treating agents of Clark, Jr. et al. with the delivery-enhancing transporting composition of Rothbard et al, with the expectation of applying a composition having enhanced dermal penetration that treats periodontal disease.

Response to Arguments

Applicant's arguments filed January 11, 2006 have been fully considered but they are not persuasive.

In particular, Applicant's argue that Rothbard et al. does not teach that the L-arginine polymers "enhance vasodilation through production of nitric oxide," as Applicants assert is recited in claims 44 and 56. The Examiner respectfully notes that these claims do not recite this exact phrase, but instead recite that the composition has a "vasodilating amount of a polymer" and that the polymer "increases vasodilation." With regards to the polymer increasing vasodilation, it is noted that as the teachings of Rothbard et al. renders obvious the claimed composition having the L-arginine polymer, the property of such a claimed composition will also be rendered obvious by the prior art teachings,

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since the properties, namely the vasodilation increase, are inseparable from its composition. Therefore, if the prior art teaches the composition or renders the composition obvious, then the properties are also taught or rendered obvious by the prior art. In re Spada, 911 F.2d 705, 709, 15 USPQ 1655, 1658 (Fed. Cir. 1990.) See MPEP 2112.01. The burden is shifted to Applicant to show that the prior art product does not possess or render obvious the same properties as the instantly claimed product.

Furthermore, regarding the “vasodilating amount” of the polymer as recited in the claim, it is noted that Rothbard et al. teaches a broad range of amounts of the polymer that are suitable for treatment compositions, as discussed above, and thus it is considered that one of ordinary skill in the art would have found it obvious to optimize and/or vary the amount of the polymer provided in the composition, such as an amount that also happens to be a vasodilating amount.

Applicant’s further argue that the “consisting of” language in claims 44 and 56 “excludes the presence of any additional components in the L-arginine polymers,” and that Rothbard et al. fails to meet this limitation because Rothbard et al. teaches that the L-arginine polymer can form non-covalent complexes with drug compounds, as shown for example in Figures 1 and 2. The Examiner notes that the transitional phrase “consisting essentially of” as recited in these claims is being interpreted as equivalent to “comprises” for the purposes of searching and applying prior art, as discussed above.

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With regards to the polymer having subunits with "each subunit consisting of a member of the group selected from L-arginine and physiologically acceptable salts of L-arginine," the Examiner notes that the subunits of the polymer of Rothbard do indeed consist of L-arginine, as the non-covalently complexed compounds do not form a part of the "polymer" as taught by Rothbard et al, and instead are a separate bodies that are non-covalently associated with the arginine polymer.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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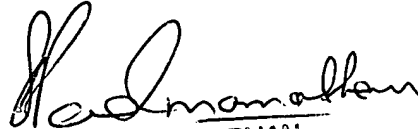
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abigail M. Cotton whose telephone number is (571) 272-8779. The examiner can normally be reached on 9:30-6:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan can be reached on (571) 272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AMC


SREENIVASAN PADMANABHAN
SUPERVISOR